## REMARKS/ARGUMENTS

Claim 7 is amended to correct the error noted by the examiner, and accordingly reconsideration of the rejection under 35 U.S.C. 112, second paragraph, is respectfully requested.

The holding that claim 7 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, as it has been here, is acknowledged with appreciation. Applicants submit however that claims 1-6 are allowable as well, for the reasons explained below.

***Claim Rejections - 35 USC § 102***

The rejection of claims 1-5 as anticipated by Witkorowicz et al. is respectfully traversed. Witkorowicz et al. do not disclose a pre-cast polyacrylamide slab gel, but rather a two-dimensional electrophoresis device in which the second-dimension separation is performed in a "flowable separation medium" which is added by the user prior to sample loading and separation, as explained in column 12, lines 9-13. A cast polyacrylamide gel, as Applicants claim, is not a flowable medium. For separations based on molecular size, the reference discloses the addition of an "entangled polymer" (paragraph bridging columns 12 and 13) to the flowable separation medium, and cites a number of linear polymers with a preference for linear polyacrylamide (column 13, lines 23-25). Linear polymers will not form a gel, and the recitation of a "flowable separation medium" neither encompasses not suggests a gel. Accordingly, the reference does not anticipate the present invention.

Furthermore, the issues addressed by this reference are not those addressed by the present invention. The polymeric coatings listed in column 8, lines 11-16, of the reference are disclosed for preventing adsorption of the sample to the gel support plate. This problem has little relevance to the problems encountered in the use of pre-cast gels upon long-term storage, such as deterioration or other transformation of the gel or its contact with the support plate.

Accordingly, the Witkorowicz et al. patent neither discloses Applicants' invention nor suggests the invention to one skilled in the art, and therefore neither anticipates nor renders obvious the subject matter of Applicants' claims.

***Claim Rejections - 35 USC § 103***

The rejection of claims 1, 2, and 4-6 as obvious over Moi et al. in view of Sugimoto et al. is respectfully traversed, particularly in view of the enclosed "DECLARATION OF CORY M. PANATTONI UNDER 37 CFR § 1.132." The rejection acknowledges that Moi et al. fail to disclose the coating of gel support plates with a nonionic amphiphilic polymer, and cites the Sugimoto et al. patent for its disclosure of polyvinyl alcohol. The only mention of polyvinyl alcohol by Sugimoto et al. however is as one member of a list of polymers, the rest of which are not within the scope of Applicants' invention, and the only ones used in the working examples are polyvinylidene chloride and polyacrylonitrile, the most prominent being polyvinylidene chloride.

What Sugimoto et al. fail to disclose is any distinction between polyvinyl alcohol and the other resins included in the list, much less any advantage that polyvinyl alcohol or a nonionic amphiphilic polymer can offer relative to the others. This distinction and advantage are demonstrated in the enclosed Declaration, in which test data obtained using surface coatings of polyvinyl alcohol, polyethylene glycol, and polyvinyl pyrrolidone, representing nonionic amphiphilic polymers, is compared with test data obtained using a surface coating of polyvinylidene chloride, representing the prior art. Note that this distinction is expressed in Applicants' specification at page 2, paragraph 06. What the comparative test data shows is that the gel that is in contact with PVDC-coated cassette walls (Exhibit 1) shows shadow bands (i.e., shadows below the dark lines) in separations of each of three different protein standards that were used as test mixtures. Each of the other three coatings presents an improvement by lessening or eliminating the shadow bands. The PVP-coated cassette walls (Exhibit 2) show a lessening of the shadow bands in the mid-range to faster-migrating bands, the PEG-coated cassette walls (Exhibit 3) show a further lessening, and the PVA-coated cassette walls (Exhibit

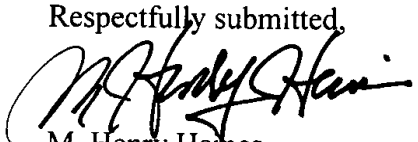
4) showed essentially complete elimination of the shadow bands. There is nothing in either the Moi et al. disclosure or the Sugimoto et al. disclosure to suggest this difference.

Claim 6 is rejected over the combination of the Witkorowicz et al. and Moi et al. patents. Since claim 6 is dependent on claim 1, the explanations given above apply and claim 6 is likewise nonobvious over this combination of references.

## CONCLUSION

For each of the reasons presented herein, Applicants submit that all claims of this patent application recite subject matter that is both novel and nonobvious over the prior art. Accordingly, reconsideration of the application is respectfully requested. Should any matters remain that can be resolved by a conference, the examiner is encouraged to telephone the undersigned at 415-576-0200.

Respectfully submitted,



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